

Claims

1. A method for producing a cover made of a special steel blank which can be deep-drawn and placed on the end of a motor vehicle exhaust pipe, characterized by the combination of the method steps directly following each other:

a) a circular blank (10) is made from a special steel plate,

b) a cup-shaped beaker (10.1, 10.2, 10.3, 10.4) with a bottom (11.4), which is inclined in respect to the longitudinal axis (25) and has a diameter (D1, D2, D3, D4) which is reduced in steps and a shell length (L1, L2, L3, L4) which increases in steps is drawn in several deep-drawing operations,

c) a centered hole (13) with a rim (14) which is ring-shaped toward the shell (12.4) is punched into the bottom (11.4),

d) the shell (12.4) is cut vertically in respect to the longitudinal axis (25) of the beaker (10.4) to the required length (Lo) and a condensate (16) and/or a fastening hole are cut into the shell (12.5),

e) the rim (14) of the bottom (11.4) is bent-in parallel in respect to the longitudinal axis (25) and is subsequently crimped into the beaker (10.6) to form an end (17) in the shape of an arc of a circle, and

f) at the finish the end section (18) on the cut open front (15) of the beaker (10.7) is tapered for decreasing the diameter.

2. The method in accordance with claim 1,
characterized in that
the transition from the inclined bottom (11.1 to 11.6) to the shell (12.1 to 12.5)
of the various deep-drawing steps is always rounded.

3. The method in accordance with claim 1 or 2,
characterized in that
the bottom (11.1 to 11.6) in respect to the shell (12. 1 to 12.5) of the various
deep-drawing steps is inclined on a diameter of approximately 70° or 110° in relation to the
longitudinal axis (25).

4. The method in accordance with one of claims 1 to 3,
characterized in that
cutting off the shell (12.4) to the required length (L_0) and cutting the
condensate drain opening (16) and/or the fastening hole are performed together.

5. The method in accordance with one of claims 1 to 4,
characterized in that
the bore (13) in the bottom (11.5) is shaved (13.1) prior to crimping the end
(15) in the shape of an arc of a circle.

6. A cover, produced in accordance with the method of claims 1 to 5, characterized in that

it is embodied to be of one piece and sleeve-shaped, wherein a front face (11.6), which is inclined in respect to the longitudinal axis (25), is provided with an end (17) which is crimped in the shape of an arc of a circle, and wherein the other front face (15) which extends perpendicularly in respect to the longitudinal axis (25) in the adjoining section (18) has a diameter which is smaller than the diameter (D4) of the remaining shell (12.4).

7. The cover in accordance with claim 6, characterized in that

the shell (12.4) is provided with an opening (16) and/or a bore.